U.S. Ocean Action Plan
Gulf of Mexico Regional Partnership

GULF OF MEXICO ALLIANCE

Water Quality Breakout Report Out
July 19, 2006

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WQ 1. Improve HAB detection and forecasting

WQ-2: Improve beach water quality management

WQ-3: Improve government efficiency in water quality monitoring

WQ: Action Blueprint Step Stats

	Complete	Underway	Tentatively Planned	Unresolved Issues
HABs (12)	**1**	**7**	**4**	
MST (7)		**1**	**6**	
WQ Monitoring (4)			**3**	**1**
TOTAL	**1**	**8**	**13**	**1**

WQ 1. Improve HAB detection and forecasting

1.1. Improve the operational HAB Forecasting System off the Southwest Florida coast.

- NOAA and FL: 2 BreveBusters at fixed stations along SW FL.
- FL & NOAA deployed three glider AUVs with BreveBuster sensors in 4/06
- NOAA and NASA working to operationalize HABs remote sensing technologies
- NOAA: Forecasting circulation models under development to improve forecast of transport

WQ 1. Improve HAB detection and forecasting

1.2. Conduct an interagency workshop to review scientific advances related to red tide and identify future priorities for the region.

- Added FL to lead w/NOAA
- NOAA, FWRI and Mote hosting workshop 7/17-20/06.

WQ 1. Improve HAB detection and forecasting

1.3. Hold workshops with local, state, and federal expert scientists to train personnel in HAB field sampling and microscopic identification methods and to demonstrate toxin-detection methods.

- Added TX as collaborator
- FWRI hosted ID workshop 6/7-9/06
- TX will consider hosting 2007 training workshop

WQ 1. Improve HAB detection and forecasting

1.4. Advance technologies for rapid field screening and enhanced real-time remote sensing, platform sensing, and autonomous sensing of HABs.

- FL & NOAA deployed three glider AUVs with BreveBuster sensors in 4/06
- FL FWC funding improved technologies

WQ 1. Improve HAB detection and forecasting

1.5. Independently evaluate and compare the multiple methods of HAB detection technologies under development for K. brevis *against microscopic identification methods.*

- U South Carolina: 4-day *K. brevis* workshop March 2006 (pigments using HPLC)

WQ 1. Improve HAB detection and forecasting

1.6. Conduct studies to determine the public health, natural resources, and socioeconomic impacts of HABs in the Gulf region.

- CDC and FL studies on health impacts along SW FL
- Mote study on hospital admissions for asthma
- Suggestion that GMNET (regional marine mortality reporting database) might be worth resurrecting

WQ 1. Improve HAB detection and forecasting

1.7. Test and provide the Alliance and GCOOS with the results of an in situ optical early warning HABs system off the coast at Corpus Christi, Texas.

- TAMU and UT: projects to monitor red tide using flow-cam technology

WQ 1. Improve HAB detection and forecasting

1.8. Fund research into relationship between anthropogenic activities and planktonic cell counts, environmental conditions that lead to bloom conditions, and testing new HAB detection and tracking technologies for routine use in observation, monitoring and forecasting programs..

- FL and TX: volunteer HABS monitoring underway for tracking purposes
- FL SFWMD looking into Lake Okeechobee discharges and effects on blooms

WQ 1. Improve HAB detection and forecasting

1.9. Collaborate with existing Gulf State programs to inform and educate the public about HABs and management actions taken to protect public health; expand educational and outreach methods used to inform the public about HABs and their impacts.

- FL and TX have HABs webpages
- Charge to Education group

WQ 1. Improve HAB detection and forecasting

1.10. Implement an operational HAB forecasting capability of the South Texas coast.

- Added NASA and NRL to collaborators
- TX and NOAA held three meetings with stakeholders (July 2006)
- Oct 2006 target for operational HABs bulletin

WQ 2. Improve HAB detection and forecasting

1.11. Develop a satellite detection and Internet-based notification capability for K. brevis off the coast of the Mexican Gulf state of Veracruz.

- Collaborative effort of EPA GED, EPA GMP, NOAA, NASA, National Association of Marine Laboratories, U.S. Integrated Ocean Observing System, and the five U.S. Gulf States
- Support the installation of two coastal meteorological stations and three K. brevis (the red tide organism) BreveBuster sensors in the vicinity of Veracruz, Mexico

WQ 1. Improve HAB detection and forecasting

1.12. Install meteorological stations in the near coastal zone where required to forecast surface currents.

- EPA will install two meteorological stations off the coast of Veracruz to support the development of a satellite and notification capability for K. brevis.

WQ 1. Improve HAB detection and forecasting

WQ-2: Improve beach water quality management

WQ-3: Improve government efficiency in water quality monitoring

WQ 2. Improve beach water quality management

The “product” of WQ-2 is a tool to help regulatory agencies identify sources of microbial pollution, as this contamination relates to human health. The primary product should distinguish human versus non-human sources. Distinguishing among sources of non-human contamination is an important secondary focus to assist the TMDL process.

WQ 2. Improve beach water quality management

- WQ-2 is laid out as a sequence of dependent steps. The details of each step depend on the previous steps, limiting the detail that can be provided in advance of those earlier steps being completed.
- Counting on GMP grant proposals for details.

WQ 2. Improve beach water quality management

2.1. Conduct a "state of the MST" workshop on pathogen indicators in recreational marine waters, epidemiological correlations, and microbial source tracking research, with an endpoint of selecting the site and designing the study and the parameters for evaluation.

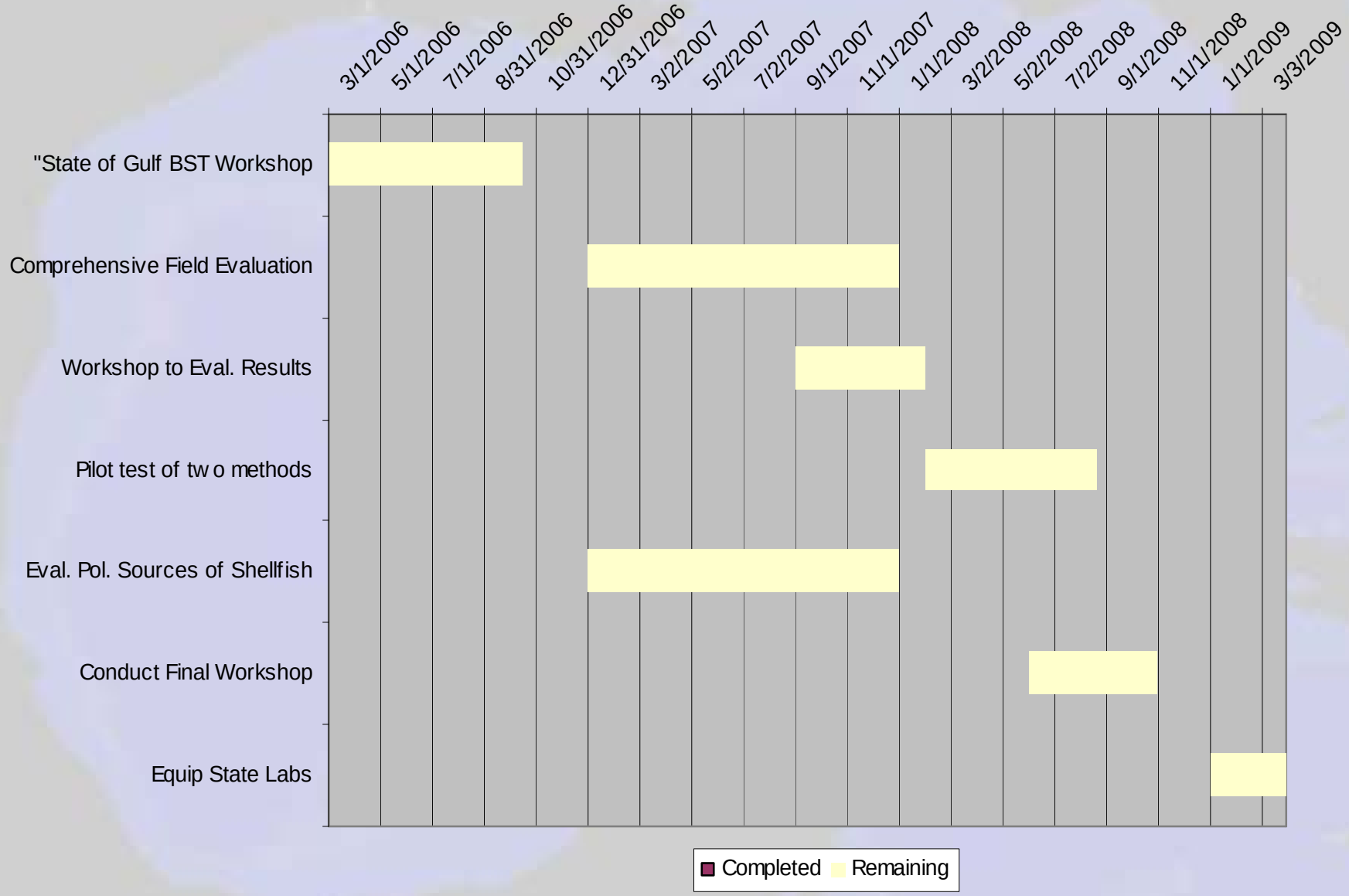
- The first workshop should be used to more definitively define the product and scope of the evaluation (i.e., WQ 2.3 and 2.4).
- U Southern Miss meeting 10/12-13 Biloxi, EPA funded, microbial source tracking networking
- Looking into possibility of using this meeting to achieve WQ 2.1.

WQ 2. Improve beach water quality management

2.2 - 2.7

- State WQ, health, and shellfish representatives must be involved in the workshop process (to design evaluation and consider results of evaluations)
- The field evaluations must demonstrate effective methods in shellfish growing waters and primary contact marine recreational waters (i.e., beaches)
- Any contract needs to maintain GOMA oversight of experimental design steps

WQ-2: Microbial Source Tracking



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WQ 3. Improve government efficiency in water quality monitoring

3.1. Host an annual Gulf of Mexico Forum for Environmental Monitoring to promote coordination of water quality monitoring by state, local, and federal agencies.

- EPA Gulf Breeze interested in opportunity to host meeting in November 2006

WQ 3. Improve government efficiency in water quality monitoring

3.2. Comprehensively survey state, local, and federal agencies for types of water quality data being collected, methods of collection, analytical methods, quality assurance protocols, proprietary restrictions, and database platforms.

- Use workshop to decide the methods on which to collect the information

WQ 3. Improve government efficiency in water quality monitoring

3.3. Develop accountability tools and accreditation standards for laboratories performing analyses included in Gulf-wide monitoring databases.

- FL and LA have lab accreditation certification requirements. Others not.
- Strategy to move forward unresolved

WQ 3. Improve government efficiency in water quality monitoring

3.4. Facilitate the selection of a pilot parameter for monitoring coordination and standardization by state and federal water quality agencies and GCOOS (leverage possible linkage to National Water Quality Monitoring Council regional pilot activities).

- Proposal to be pilot for National Monitoring Network
- Desire is to include 'core' WQ monitoring parameters as well as chlorophyll-a and HABs (if agreement can be reached)

Questions